Index 1997

Subject

A-level chemistry, new ideas, 68L
A-level, exam boards, 58C
A-level, investigative work, 64C
A-level, organic chemistry, 39
A-levels, indicators of university success, 68L, 95L
Accelerator Mass Spectrometry, 159
Acetic anhydride hydrolysis, 22
Acyclovir, mode of action, 100
Advanced Subsidiary exam, 58C
Alcohols, activity, 131
Alexanders, chromatography experiment, 45
Alkyl group, properties, 131
Alternative energy sources, 69
Amines, activity, 131
Analytical chemistry, plant extracts, 45
Anionic clays, 135
Anthocyanidins, 124
Antituberculous drugs, 156
Antiviral chemotherapy, 99
Artificial sweeteners, 37C
Atomic composition, patterns, 76
Atomic force microscope, 107
Atomic number, discovery, 144
Atoms and molecules, teaching, 25
Azidothymidine, AZT, 101

Bacterial infections, 154
Balancing equations, 94L
Barbertonite, 136
BCG, tuberculosis vaccine, 155
Binnig, Gerd, 107
Biodiesel, 69
Biosensors, 20
Book reviews
  A-level chemistry, general, 26, 54, 142, 168
  A-level, organic chemistry, 110
  A-level, practical, 26
  Analytical chemistry, Open Learning, 27
  AS-level, modular, 26
  Assessment, research into, 55
  Asymmetric synthesis, 27
  Biochemistry, A-level, 168
  Biosensors, 143
  Coordinated science, 82, 142,
  Curricula reform, 55
  Data bases, 83
  Elements, descriptive, 110
  Environmental science, undergraduate, 169
  Ethics of science, teaching of, 54
  Frankland, Edward, 169
  Gaseous state, A-level, 142
  GCSE double award science, 26, 168
  General chemistry, 169
  Geology, general, 110
  GNVQ Advanced Science, 168
  Higher chemistry, 110
  Industrial chemistry, 55
  Infrared spectroscopy, 27
  Inorganic chemistry, undergraduate, 110, 143
  KS4 science, 168
  Materials, A-level, 82
  Mathematics, for chemists, 111
  Molecular modelling, A-level, 82
  Molecular origami, 83
  On-line searching, 83
  Organic chemistry, 110
  Physical chemistry, AS- and A-level, 26, 142
  Physical inorganic chemistry, 143
  Physical organic chemistry, 55
  Public understanding, science, 54,
  Quantitative inorganic analysis, 27
  Reaction kinetics, 83
  Renewable energy, 82
  Revision texts, A-level, 54, 142
  Safety, 143
  Science education research, 169
  Solid state chemistry, 83
  VSEPR theory, 82
Boxplots, 162

C_{60} experiment, 64C
Cadmium, 92C
CAL materials, review, 138
Calculus connections, CD-ROM, 139
Calmat, maths software, 139
Carbon, allotropes, 150C
Careers resources, 63C
Catalysts, applications of, 96
Cetane number, 70
Challenge of materials, Science Museum, 88C
Chemical kinetics, study of, 47
Chemical Trivial Pursuit, 86C
Chemistry courses, secondary, 43
Chemistry courses, tertiary, 38L
Chemistry Olympiad, 118C
Chemistry teachers, 94L
Chemistry trails, 8C, 63C, 120C, 122L,
Chemistry within, chemistry without, 102
Chemistry, future of, 67L
Chemistry, in swimming pools, 120C
Chemistry, in wine, 124
Chemlingo, 37C, 92C, 150C
Chimie la classe, 86C
Chlorine, soundbite molecule, 32C
Chromatography, A-level experiment, 45
Colds and flu, treatment, 101
Computer assisted learning, 36C
Core chemistry, undergraduate, 172
Critical thinking, 79
Crystal growing competition, 90C

Dance–musical, school chemistry, 116C
Dearing 16–19, follow on, 58C
Debate, keeping chemistry alive, 67L
Demonstrators' guidelines, 49
Depression, treatment of, 72
Diagnosys, maths software for engineers, 138
Diagonal relationships, 72
Distillates,
  Artificial DNA base, 109
  Atomic structure, teaching, 25
  Baldness, treatment, 53
  Concept maps, 81
  Diels–Alder catalyst, 55
  Epigallocathechin-3-gallate, 167
  Green tea, anticancer treatment, 167
  Group work, secondary, 25
  Information technology, use of, 141
  Inositol phosphate mimics, 109
  Investigative work, National Curriculum, 141
  Manic depression, new treatment, 109
  Oestrogen antagonist, 53
  Porous organic solids, 109
  Pyridinium bisretinoid, 167
  Rote learning, gender differences, 81
  Solubility, teaching of, 81
  Tectons, 109
  Uranium oxide-based catalyst, 53
  Vaccine theory, 167
  Vitamin A, 167
Drug resistance, 156
Dyers and tanners, 63C

Ecobus, 38L
ECRICE conference, 1997, 147C
Electron, discovery, 59C
Electrosynthesis, 140L
Emissions, from buses, 70
Environmental issues, landfill, 11
Esters, soundbite molecule, 62C
European chemistry, undergraduate, 172
Exploratory data analysis, 162

Fast ion atom bombardment, 14
Fatty acid methyl esters, 70
Flavanols, 124
Fullerenes, experimental, 64C

Garratt, John, Nyholm winner, 61C
Glucose, monitoring, 20
GNVQ Advanced Science, part-time, 160
GNVQ, key skills, 35C, 161
GNVQ, terminology, 161
Group work, secondary, 25

Heterogeneous catalysts, 96
Higher Education, Dearing report, 114C
Hinshelwood, Sir Cyril, 147C
History of chemistry, combustion, 77
History of chemistry, reaction kinetics, 147C
HIV, 101
Homogeneous catalysts, 96
Huddersfield experiment, 43
Hydrotalcite, 135

Ibuprofen, preparation, 97
Ice Man, radiocarbon dating, 164
InfoChem
  Air bags, no 45
  Alcohol, breath and blood tests, no 47
  Antifouling paints, no 48
  Belousov–Zhabotinskii reaction, no 46
  Careers in chemistry, nos 43, 44, 45, 46, 47, 48
  Cars, emissions, materials and safety, no 45
  Catalytic converters, no 45
  Comet chemistry, no 46
  Crown ethers, no 44
  Fischer, Emil, no 44
  Heroin addiction, no 45
  Lehn, Jean-Marie, no 44
  Molecular nanosyringes, no 43
  Molecular recognition, no 44
  Oleamide, sleep inducing chemical, no 47
  Opium, no 45
  Organic chemistry, hot water reactions, no 44
  Polymeric gels, no 46
  Preserving fruit and vegetables, no 44
  Sensors, no 44
  Smart materials, no 43
  Smelly molecules, no 48
  Synthetic polymer gels, no 43
  Tooth decay, prevention, no 43
Information technology, undergraduate practical, 93C
Inorganic teaching, undergraduate, 102
Inositol pathway, 73
Insect pheromones, 39
Investigative work, secondary, 17
Invisible ink, soundbite molecule, 89C
Ion exchangers, 137
Ionisation techniques, 14

Key skills, Dearing Report, 114C
Kroto, Sir Harry, 4C

Landfill waste, 11
Lavoisier, Antoine-Laurent, experiment, 77
Layered double hydroxides, 135
Libby, W. F., 157
Lipids, in transport, 69
Liquid secondary ion mass spectrometry, 14
Lithium carbonate, in medicine, 72
Logic problems, tertiary teaching, 151C

Manipulating data, 163
Mass spectrometry, 14
Mathematics, in chemistry courses, 105
Mathematics, the York approach, 106
Mathwise, software, 139
Model questions, 132
Mole fraction, 122L
Moseley, Henry, 144
Multimedia video, chemistry, 91C
Mycobacterial cell wall, 157

National Curriculum, revision, 118C
National Curriculum, science, 35C, 146C
National Portrait Gallery, science lectures, 61C
Network series, 5C, 36C, 90C, 151C
Nitrogen oxides, 10L
Nobel challenge, sixthform experiment, 64C
Nobel prize, chemistry, 4C
Nobel prize, physics, 4C
NO_x, definition, 94L, 153L

Oil alternatives, 69
OUTV guide, 24

Parliamentary Links Day, 118C
Particle model, secondary teaching, 132
Peptidoglycan, 158
Periodic Table, 68L
Petrol additives, 38L
Pheromones, 39
Phlogiston theory, 77
Plastics, resource materials, 89C
Polyphenols, 119C
Post-16 structure, 58C
Postgraduate demonstrators, 49
Potential–pH diagrams, 51
Pourbaix diagrams, 51
Pre-lab classes, tertiary, 5C
Project Improve, 36C
Public understanding of chemistry, 43

Qualifications, new HE framework, 115C
Queen bee pheromone, 41

Radiocarbon dating, 157
Raoult's Law, 10L, 153L
Real chemistry, 122L
Recruitment of teachers, 68L
Research Assessment Exercise, 1996, 31C
Research chemistry, qualifications, 112
Rifampicin, 156
Rocket fuels, soundbite molecules, 148C
Rohrer, Heinrich, 107
RSC, Assessment Subject Group, skills test, 88C
RSC, *Chemistry at Work*, 117C
RSC, egg race, 17
RSC, inquiry into HE, 87C
RSC, Master Classes, 119C
RSC, Nyholm winner, 61C
RSC, on HE inquiry, comment 28
RSC, sixthform summer school, 65C
RSC, teacher fellowship, 120C
RSC, Top of the Bench winners, 61C

Safety, in schools, 122L
Salters' A-level chemistry, 34C
Salters' chemistry teacher prize, 5C
Salters' student prizes, 33
Saponification, 47
SCAA, 1995 A-level statistics, 62C
Scanning Probe Microscopy, 107
Scanning Tunnelling Microscopy, 98
Scatterplots, 163
School chemistry, policy, 146C
Schools–industry links, in Europe, 86C
Science teachers, recruitment of, 34C
Secondary–tertiary interface, 2C, 87C
Set97, 60C
Smart materials, 38L
Smugglers!, egg race, 17
Sorbents, 137
Soundbite molecules, 6C, 32C, 62C, 89C, 119C, 148C
Standards, school chemistry, 30C
Streptomycin, 156
Sub-degree expansion, 114C
Sugar, etymology, 37C
Sweat, chemistry of, 6C

Takovite, 135
Teaching methods, kinetics, 22
Technology Foresight Programme, 31C
Thomson, J. J., discovery of electron, 84
Transferable skills, teaching of, 79
Transmath Consortium, 139
Tuberculosis, 154
Turin Shroud, dating, 159

Undergraduate experiment, chromatography, 45
Undergraduate experiment, combustion, 78
Undergraduate experiment, kinetics, 22
Undergraduate experiment, monitoring urea, 20
Undergraduate experiment, saponification, 47
Undergraduate experiment, vanadium chemistry, 165
Undergraduate teaching method, 79
Undergraduate teaching, practical work, 5C, 90C, 93C
Units, ppb, 19
University chemistry courses, 2C, 56, 95L
Urea, monitoring, 20

Valence Shell Electron Pair Repulsion model, 42L, 153L
Valency, teaching of, 75
Van den Broek, Antonius, 144
Vanadium chemistry, 165
Vanadyl acetylacetonate, preparation, 165
Variety in Chemistry Teaching, conference, 6C
Vineyards, chemistry in, 123
Virtual chemistry in the lab, 93C
Virus characteristics, 99

Waste management, 11
Wiechert, Emil, discovery of electron, 84
Wine, 123
World Wide Web, virtual lab addresses, 93C

Zinc, etymology, 92C

Key
C – Column
L – Letter to the Editor

Authors

Allen, B., 93C
Armstead, D. E. F., 45

Bark, L. S., 19
Barker, P. A., 10L
Beckett, P. J., 140L
Bennett, S., 90C
Berry, M., 94L
Billett, E. H., 38L
Boohan, R., 162
Borrows, P., 8C, 63C, 120C, 122L
Bradley, D., 4C, 53, 59C, 109, 167
Brightman, C. A. J., 140L
Brown, T. M., 72, 84, 144
Burch, R., 96

Campbell, S. A., 107
Carlino, S., 135
Challand, S. R., 99
Childs, P., 37C, 92C, 150C
Cockcroft, W. E. L., 47
Coles, M., 146C
Colston, M. J., 154
Comrie, A. M., 122L
Conole, G., 36C
Cotton, S., 6C, 32C, 39, 62C, 67L, 89C, 119C, 149C
Crellin, J., 94L

Dadds, M. J. S., 67L
Davies, A. K., 19
Denby, D., 38L, 68L
Doggett, G., 105
Donovan, R., 69
Dronsfield, A. T., 72, 84, 144

Eggins, B. R., 20
El Seoud, M. I., 22
El Seoud, O. A., 22
Ellis, P. M., 72
Evetts, M., 94L

Fensham, P. J., 43
Fleet, R. J., 10L
Fleming, A., 146C
Freestone, N. P., 11

Gagan, M., 172
Garratt, J., 5C, 79
Geary, W. J., 49
Gibson, J. F., 123
Gillespie, R. J., 10L

Hall, R., 69
Hanson, J. R., 49
Hedges, R. E. M., 157
Holt, G. J., 95L
Hoppé, J. I., 49
Hoyland, M. F., 17
Hubbard, A., 56
Hughes, P., 131

Kauffman, G. B., 38L, 153L
Kee, T. P., 17, 95L, 102
Knott, A., 77

Laing, M., 68L
Langley, G. J., 14
Logan, S. R., 153L

Maskill, R., 132
Mayo, I. 38L
McAteer, G., 20
McGowan, P. C., 102
Meering, J., 64C
Mills, G. A., 14, 107
Murphy, C. J., 68L

Nakagawa, T., 122L
Napoli, A., 51
Nelson, P. G., 75, 122L
Nelson, S., 122L
Nicholson, J., 68L, 112

O'Brien, C., 148C
Oldfield, J., 122L
Overton, T., 79, 151C

Parker, J. S., 84, 144
Parkinson, J., 25, 81, 141
Pedrosa de Jesus, H., 132
Phillips, P. S., 11, 69
Pires, P. A. R., 22
Plesch, P. H., 94L
Pogliani, L., 51
Prichard, W. H., 49

Selley, N., 77
Smith, J. R., 107
Smithers, A., 28, 95L
Southgate, D., 122L
Stevenson, R., 31C
Suttie, C., 160

Takashima, K., 22
Tiedemann, P. W., 153L
Tudela, D., 42L

Vincent, A., 94L, 165

Walker, S., 138
Wheeler, G., 47

Yates, P. C., 6C